

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

• • R E M A R K S / A R G U M E N T S • •

The Office Action of August 25, 2005 has been thoroughly studied. Accordingly the amendments presented herein for the application, considered together with the following remarks, are believed to be sufficient to place the application into condition for allowance.

By the present amendment, independent claim 1 has been changed at line 7 to recite "collinear grooves" so as to provide positive antecedent basis for this term as the Examiner has courteously suggested on page 4 of the Office Action.

Entry of the changes to the claims is respectfully requested.

Claims 1-12 are pending in this application.

On page 4 of the Office Action the Examiner has rejected claims 1-12 under 35 U.S.C. §112, second paragraph. Under this rejection the Examiner has noted an antecedent basis problem in claim 1.

Applicants have corrected this antecedent basis problem by adapting the change to claim 1 that was courteously suggested by the Examiner.

Claims 1-9 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,459,016 to Rosenfeld et al. (Rosenfeld et al. '016) in view of U.S. Patent No. 5,451,442 to Pieniak et al. alone or in the alternative also in view of U.S. Patent No. 5,514,104 to Cole et al. and U.S. Patent No. 5,891,118 to Toyoshima et al.

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenfeld et al '016 in view of Pieniak et al, and Materials Handbook, alone, or in the alternative also in view of Cole et al and Toyoshima et al.

For the reasons set forth below, it is submitted that all of the pending claims are allowable over the prior art of record and therefore, each of the outstanding prior art rejections of the claims should properly be withdrawn.

Favorable reconsideration by the Examiner is earnestly solicited.

On pages 2-4 of the Official Action the Examiner has set forth her interpretation of applicants' pending claims:

The Examiner seems to make the following interpretations:

- 1) The recitation of "at a lower portion of the...core" does not require that the zone be at the lowest or lowermost portion of the core.
- 2) The recitation of a "majority of the superabsorbent particles" only requires 50% or more.
- 3) "Non-discontinuous" is defined as "extending without interruption or cessation.
- 4) "Gradient" is defined as "A rate of inclination: slope."
- 5) "Non-discontinuous" will be interpreted as including particles being spaced apart by any distance.

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

6) "A higher concentration...grooves" does not require the concentration of the particles of the zone to be highest in the vicinity of the at least one pair of grooves just higher in the vicinity that in at least some other portion of the zone.

There seems to be some incongruity between the axiom that an Examiner is allowed to interpret claims so as to give the claims their broadest "reasonable" interpretation, and the axiom that claims are to be interpreted from the view of one skilled in the art, in light of the specification.

While the Examiner seems to have developed an ability to analyze and interpret the claim language in minutia, it almost seems that such analysis/interpretation goes beyond the "reasonable" standard, because it is seriously doubtful that those skilled in the art reading applicants' disclosure and claims would hold the same interpretation as the Examiner.

With regard to the Examiner's interpretation that the recitation of "at a lower portion of the...core" does not require that the zone be at the lowest or lowermost portion of the core, the full context of this language is:

substantially all of said superabsorbent polymer particles contained within the liquid-absorbent core being localized in a single zone at a lower portion of the liquid-absorbent core

Thus, to meet this limitation, the prior art would have to teach a core having superabsorbent polymer particles in which "substantially all" of the superabsorbent polymer particles were localized or contained in "a single zone" at a lower portion of the core.

As far as applicants can tell, the primary reference to Rosenfeld et al. teaches away from such a structure.

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

With regard to the Examiner's proffered definition of "gradient" as "A rate of inclination: slope," applicants note that the proper context of the interpreted term is "non-discontinuous density gradient in a thickness direction of the liquid-absorbent core."

A search on the term "density gradient" in patents on the PTO website resulted in 7,649 "hits."

The Examiner should accordingly interpret "density gradient" in accordance with an art-recognized definition and not the mere definition of "gradient."

With regard to the Examiner's interpretation of the phrase "a majority of the superabsorbent particles" as only requiring 50% or more, applicants note that claim 1 additionally requires that "substantially all" of the superabsorbent polymer particles were localized or contained in "a single zone" at a lower portion of the core.

With regard to the Examiner's interpretation that "Non-discontinuous" is defined as "extending without interruption or cessation, it is noted that the context of this phrase is:

said superabsorbent polymer particles being distributed so as to have a non-discontinuous density gradient in a thickness direction of the liquid-absorbent core.

So, applying the Examiner's definition the density gradient "extends without interruption or cessation."

This would seem to preclude the Examiner's from then interpreting applicants' claim language "non-discontinuous" as "including the particles being spaced by any distance."

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

The Examiner has to reasonable apply the limitation that the “density gradient” as to be such that it “extends without interruption or cessation.” At some point, when there is a significant distance between groups of the particles, the density gradient will fail to extend “without interruption or cessation.” It is the clear situation in Rosenfeld et al. wherein the “first” and “second” high absorbency zones are physically defined by an interruption or cessation in the density gradients of the superabsorbent polymer particles. Otherwise, Rosenfeld et al. would not provided separate first and second high absorbency zones as required.

Applicants’ claimed invention excludes the structure of Rosenfeld et al.

With regard to the Examiner’s interpretation that the phrase “A higher concentration...grooves” does not require the concentration of the particles of the zone to be highest in the vicinity of the at least one pair of grooves just higher in the vicinity that in at least some other portion of the zone, this limitation requires it to be combined with the other limitations in applicants’ claimed invention, including the limitation that “substantially all” of the superabsorbent polymer particles were localized or contained in “a single zone” at a lower portion of the core (and then further distributed so that a higher concentration of the superabsorbent polymer particles are within a vicinity of the at least one pair of grooves.

In relying upon Rosenfeld et al. ‘016 the Examiner states that the “single zone” recited in applicants’ independent claim 1:

...is considered the two adjacent superabsorbent concentrations, e.g. 8 and 10 as seen in Figure 1 of similar to only 10 and 64 in Figures 4 and 5, which have had grooves compressed thereinto, e.g. as seen in Figures 2 and 4-5...

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

The manner in which the Examiner has interpreted two adjacent superabsorbent concentrations in Rosenfeld et al. '016 as reading on applicants' "single zone" fails to meet applicants' claim limitations which require:

a single zone at a lower portion of the liquid-absorbent core with said superabsorbent polymer particles being distributed so as to have a non-discontinuous density gradient in a thickness direction of the liquid-absorbent core which extends across an entire thickness of the single zone so that a majority of the superabsorbent particles are located within a lower half of the liquid-absorbent core;

Note in every embodiment, Rosenfeld et al. '016 includes an upper or first zone containing superabsorbent polymer particles (e.g., zone 8 in Fig. 1) in addition to a lower or second zone containing superabsorbent polymer particles (e.g., zone 10 in Fig. 1). Moreover, there are no embodiments in which two adjacent zones of superabsorbent polymer particles collectively include a majority of the superabsorbent particles that are also located within a lower half of the liquid-absorbent core.

In addition, the manner in which the Examiner is interpreting Rosenfeld et al. '016 does not read on the limitation in applicants' independent claim 1 that that the superabsorbent polymer particles are distributed so as to have a non-discontinuous density gradient in a thickness direction of the liquid-absorbent core which extends across an entire thickness of the single zone.

By interpreting two of the adjacent absorbency zones (e.g., 8 and 10 in Fig. 1) collectively as reading on applicants' claimed single zone, the resulting structure would necessarily include a discontinuous density gradient between the adjacent absorbency zones, which is excluded from applicant's claimed invention.

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

Rosenfeld et al. '884 teaches an absorbent article having a thickness in which the upper 35% of the thickness comprises a high absorbency zone that comprises absorbent fibers and superabsorbent polymer particles and in which the lower 65% of the thickness comprises a low absorbency zone that is "substantially free" of superabsorbent polymer particles.

Applicants' independent claim 1 requires that a majority of the superabsorbent particles are located within a lower half of the liquid-absorbent core.

Accordingly, Rosenfeld et al. '884 specifically teaches away from applicants' claimed invention.

The Examiner has relied upon Pieniak et al. as teaching that it is known to wrap an absorbent core in tissue paper.

The Examiner has relied upon each of Toyoshima et al. and Cole et al. as teaching the "interchangeability of an embossed groove pattern in which grooves are continuous alone/and curved for a pattern in which the grooves are discontinuous alone/and straight."

The Examiner's further reliance upon Pieniak, Toyoshima et al. and Cole et al. does not overcome the differences between the present invention and Rosenfeld et al. '016 as discussed above.

The Examiner has relied upon Materials Handbook as disclosing the melting point of acrylic resins.

The Examiner's further relied upon Materials Handbook does not overcome the differences between the present invention and Rosenfeld et al. '016 as discussed above.

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicants' claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejections of the claims should hence be withdrawn.

Therefore, reconsideration and withdrawal of the outstanding rejections of the claims and an early allowance of the claims is believed to be in order.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

If upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved; the Examiner is invited to contact applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of

Appl. No. 09/997,132
Amdt. Dated November 25, 2005
Reply to Office Action of August 25, 2005

time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,



Michael S. Gzybowski
Reg. No. 32,816

BUTZEL LONG
350 South Main Street
Suite 300
Ann Arbor, Michigan 48104
(734) 995-3110

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